

**REMARKS**

Claims 1-2, 10-12, 20-22 and 27-33 are pending in this application. By this Amendment, claims 1, 10-12, 20, 21, and 27-33 are amended. No new matter is added.

Applicant appreciates the courtesy shown to Applicant's representative by Examiner Pappas in the December 6, 2008 personal interview. Applicant's separate record of the substance of the interview is incorporated into the following remarks.

**I. Formal Matters**

In the Office Action, claims 30-31 are objected to. By this Amendment, claims 30-31 are amended in accordance with the Examiner's suggestions to add structure consistent with the underlying independent claims. Withdrawal of the objection is respectfully requested.

**II. Pending Claims 11, 12, 20, 30, and 31 Define Statutory Subject Matter**

In the Office Action, claims 11, 12, 20, 30, and 31 are rejected under 35 U.S.C. §101 for allegedly being directed to non-statutory subject matter. In particular, as clarified during the personal interview, Examiner Pappas objects to the recitation of a "carrier wave" in the specification as a medium. This rejection is respectfully traversed.

As discussed during the interview, Applicants amend claims 11, 12, 20, 30, and 31 to add more specific physical structure to the general "medium" previously claimed. In particular, these claims now recite a "computer readable information storage medium." This is supported, for example, by various ones of elements 170, 172, 174, 178, 180 and 194 in FIG. 1 and described on pages 3 and 8-9, as well as various elements in FIG. 8 described on page 24, such as CD 982 and ROM 950. Each of these encompass examples of physical embodiments of information storage media that can store a program as set forth in the claims and are statutory. Withdrawal of the rejection is respectfully requested.

### III. Pending Claims 1-2, 10-12, 20-22, and 27-33 Define Patentable Subject Matter

In the Office Action, claims 1, 2, 10-12, 20-22 and 27 (presumably including claims 28-33) are rejected under 35 U.S.C. §103(a) over *Computer Graphics: Principles and Practices* to Foley et al. ("Foley") in view of U.S. Patent No. 5,764,231 to Ray et al. ("Ray") further in view of U.S. Patent Application Publication No. 2003/0011618A1 to Deering and U.S. Patent No. 5,990,904 to Griffin. This rejection is respectfully traversed.

As admitted in the Office Action, (1) Foley fails to teach the "depth cueing area only being set near a backward clipping plane"; (2) Foley and Ray fail to teach "varying an alpha value of the object so that the object being more distant from the viewpoint becomes more transparent"; (3) Foley, Ray and Deering fail to teach "sorting objects of which alpha values are varied so that the objects are drawn in succession starting from an object nearest to the viewpoint and performing hidden-surface erasing based on a Z-buffer process for the objects of which alpha values are varied"; and (4) Foley, Ray and Deering fail to teach "varying a depth cueing value for each vertex of the object based on a Z-value for each vertex of the object based on the Z-value for each vertex of the object."

As discussed during the personal interview, specific processing occurs within the defined depth cueing area. See claim 1, for example, which recites "depth cueing...within a depth cueing area", "varying an alpha ( $\alpha$ ) value...positioned within the depth cueing area", "sorting objects within the depth cueing area", and "performing hidden-surface erasing based on a Z-buffer process for the objects within the depth cueing area." That is, this specifically defined depth cueing area is used to assess which objects are varied, sorted or erased.

During the interview, aspects of the claims were also discussed, including a discussion of what was meant by "near." In light of the Examiner's comments, independent claims 1, 10, 11, 20, 21, and 27 are revised for clarity to recite that the depth cueing area is "part of a viewing volume based on a position of the viewpoint and includes a backward clipping plane

of the viewing volume." This feature is supported, for example, by Applicant's page 15, lines 17-20 and illustrated by Figs. 2, 3A and 3B. With this, depth cueing and alpha value processing is only performed for objects within this narrowly defined depth cueing area, resulting in a reduced processing load while solving problems such as flicker described in Fig. 3A. Thus, the subject matter embodied by independent claims 1, 10, 11, 20, 21, and 27 has advantages such as preventing screen.

Foley, Deering and Griffin fail to teach or suggest such a feature. Ray also fails to teach or suggest having the depth cueing area being part of a viewing volume based on a position of viewpoint and including a backward clipping plane of the viewing volume as claimed.

Because Ray fails to overcome the various admitted deficiencies of Foley, Deering and Griffin, independent claims 1, 10, 11, 20, 21, and 27 and claims dependent therefrom distinguish over the cited art.

Moreover, with respect to dependent claims 28-33, the alleged passages of Griffin fail to teach that "depth cueing value increases based on an increase in the Z-value."

Examiner Pappas during the interview requested clarification of the "value" that is being increased. Claims 28-33 are accordingly revised for clarity to specify that the depth cueing "value" is a parameter for determining the strength of the depth cueing effect. This is supported, for example, by page 13, lines 1-9. This is also illustrated in Applicant's Fig. 2 where it is shown that as the Z-value increases the depth cueing effect increases from the original color towards a target color of the background. That is, more "effect" occurs with an increase in Z-value.

Griffin merely teaches that to "perform hidden surface removal, the pixel engine 406 compares depth values for incoming pixels...with pixels at corresponding locations in the pixel or fragment buffers. For shadowing operations, the pixel engine provides a Z-value to

the texture filter engine 400 where it is compared with Z-values in a shadow Z map." (col. 33, lines 29-35). While depth values and Z-values are compared, there is no teaching of the claimed relationship of how the increase in depth value relates to the Z-value increase to change the depth cueing effect.

Accordingly, dependent claims 28-33 are allowable for their dependence on allowable base claims and for the additional features recited therein. Withdrawal of the rejection is respectfully requested.

**IV. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the pending claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff  
Registration No. 27,075

Stephen P. Catlin  
Registration No. 36,101

JAO:SPC/ccs

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**OLIFF & BERRIDGE, PLC**  
**P.O. Box 19928**  
**Alexandria, Virginia 22320**  
**Telephone: (703) 836-6400**

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